

High-efficiency PV Module LA20-12S

Technology

The LORENTZ LA-Series of PV modules offer a conversion efficiency of 17-20% due to the unique back-contact technology.

Our monocrystalline silicon solar cells yield a higher voltage per cell. Therefore 34 cells are sufficient to provide the same voltage as traditional 36-cell modules. As a result, LORENTZ modules are lighter and smaller.

In combination with an extremely low voltage-temperature coefficient, this guarantees a superior battery charging performance, even at high operating temperatures.

Exceptional low-light performance and broad spectral response further enhance energy delivery in all weather conditions, year round.

Features

- aerospace style cell interconnects with in-plane strain relief
- advanced EVA encapsulation system with multi-layer backsheet for long-term package durability
- high reliability

Warranty

- Warranty: 1 year
- Performance guarantee: 5 years (90% power output)

Details according to warranty issued by LORENTZ

Standards

LA20-12S meets the requirements for CE.



Applications

- remote village lighting
- solar home systems
- street and camp lights
- traffic signals
- medical facilities in remote areas
- microwave/radio repeater stations
- battery charging
- water pumping
- water purification systems



Specifications

Electrical Data

Peak power	P _{max}	[Wp]	20
Tolerance		[%]	+20 / -10
Max. power current	I _{mp}	[A]	1.2
Max. power voltage	V _{mp}	[V]	17.1
Short circuit current	I _{sc}	[A]	1.3
Open circuit voltage	V _{oc}	[V]	22.3
Efficiency of cells		[%]	17.1
Temperature co-efficient for P _{max}		[%/°C]	-0.38
Temperature co-efficient for V _{oc}		[mV/°C]	-64.6
Temperature co-efficient for I _{sc}		[mA/°C]	0.88
Max. system voltage		[V]	48

All technical data at standard test condition:

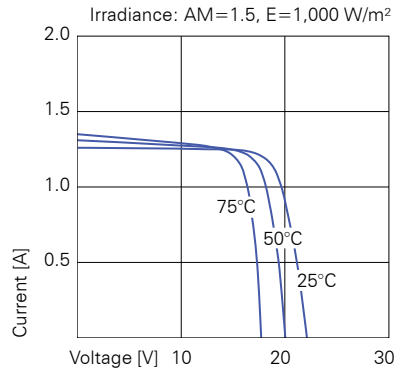
AM = 1.5, E = 1,000W/m², cell temperature: 25 °C

Cells

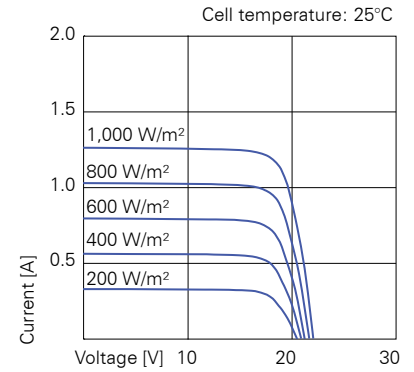
Number of cells per module	34*
Cell technology	monocrystalline
Cell shape	rectangular

* Due to the back-contact cell technology only 34 cells are required to yield the same V_{mp} voltage as traditional SI products with 36 cells.

Electrical Performance

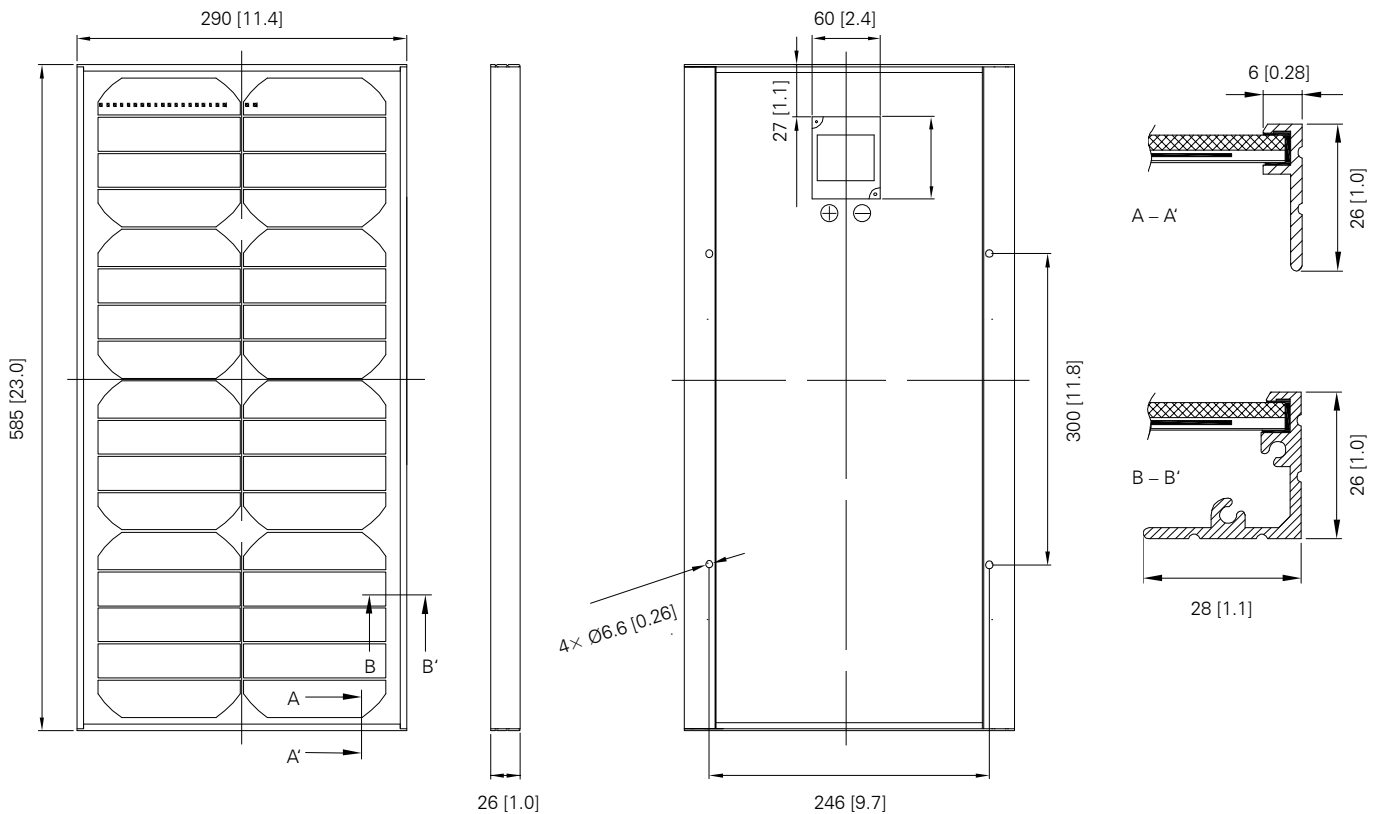


Current-voltage characteristics of PV module LORENTZ LA20-12S at various cell temperatures.



Current-voltage characteristics of PV module LORENTZ LA20-12S at various irradiation levels.

Physical Specifications mm [in]



Weight	[kg]	2.2
Dimension	[mm]	290 × 585 × 26